

## Claims

1. Process for the depolymerization of glycosaminoglycans characterized by the use of electron-beam radiation.
- 5 2. Process according to claim 1 performed by using a dynamic irradiation process.
3. Process according to claims 1-2 wherein the glycosaminoglycane is heparin.
4. Process according to claims 1-3 wherein the electron-beam radiation has an energy comprised between 100 and 1000 keV.
- 10 5. Process according to claims 1-4 wherein the process is performed in aqueous solution.
6. Process for the depolymerization of glycosaminoglycans according to claim 5 in the presence of an organic compound represented by formulas I, II and III:



wherein each R is independently selected from the group consisting of H, OH, CHO,  $C_1\text{-}C_6$  alkyl and acyl, optionally substituted by oxygen atoms; two R groups optionally join together to form a ring.

- 25 7. Process according to claim 6 wherein the organic compound is selected from the group consisting of methanol, ethanol, n-propanol, isopropanol, n-butanol, isobutanol, glycerol, tetrahydrofuran, dioxane, diethylether, tertbutylmethylether, dioxolane, formaldehyde, glyoxal, acetaldehyde, N,N-dimethylformamide, N,N-dimethylacetamide, N,N-diethylformamide, N-methylpyrrolidone.
- 30 8. Process according to claims 6-7 wherein the amount of organic compound varies between 0.1 and 5%.
9. Process according to claims 1-7 wherein the amount of radiation used is comprised between 400 and 8,000 kGy.

10. Glycosaminoglycans obtainable by the process of claims 1-9.